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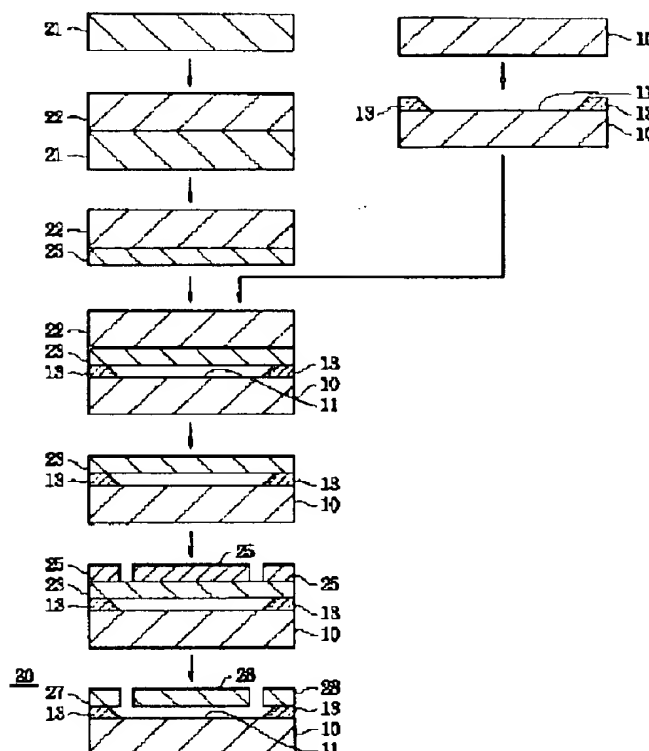
APPLICATION NUMBER : 09040976

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TITLE : FABRICATION OF SEMICONDUCTOR
INERTIAL SENSOR



ABSTRACT : PROBLEM TO BE SOLVED: To eliminate laser machining of a wafer by etching a single crystal silicon layer bonded to a silicon substrate selectively thereby forming a movable electrode of single crystal silicon and a pair of fixed electrodes of single crystal silicon on the opposite sides thereof.

SOLUTION: A second silicon wafer 22 is pasted to a first silicon wafer 21 and polished to form a single crystal silicon layer 23 which is then anode bonded to a glass spacer layer 13. After removing the second silicon wafer 22, Al 25 is deposited on the surface of the single crystal silicon layer 23 and patterned and then the single crystal silicon layer 23 is etched selectively to form a movable electrode 26 along with a pair of fixed electrodes 27, 28 of polysilicon formed on the opposite sides thereof through a small gap. Since a movable electrode 26 and a pair of fixed electrodes 27, 28 are formed on the upper surface of a silicon substrate 10 through a glass spacer layer 13, the movable electrode 26 can be floated above a gap 11, sandwiched between the pair of fixed electrodes 27, 28, and laser machining of a wafer can be eliminated.

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